S.No.	Syllabus
1-A	**General Human Anatomy including Embryology, Osteology and Histology**
	1. Introduction. 2. Detailed anatomy and Osteology of Head & Neck. 3. Gross Anatomy of Thorax, Abdomen, and Extremities. 4. Embryology of Head, Neck with emphasis on development of face, jaws, tongue, palates, salivary glands, pharyngeal arches and pouches Lymphatic and blood vessel system. G.I. system. 5. Paranasal air sinuses. 6. (a) Gross Anatomy of the brain; (b)Study of Cranial nerves – in detail extra cranial course 5th, 7th and 9th nerves and upper Cervical nerves. 7. Genetics: Fundamentals of Genetics. 8. Anthropology: General Principles.
1-B	**Histology**
	course of 30 lectures/demonstrations and practicals covering the following:- 1. Epitheliоum including gland and of Gastro-intestinal tract. 2. Muscle. 3. Periosteum. 4. Bone 5. Cartilage. 6. Adipose tissue 7. Fibrous tissue 8. Elastic tissue 9. Blood 10. Blood vessels 11. Nerves 12. Lung 13. Kidney 14. Endocrine glands Dissection of Head and neck excluding opening of skull and demonstrations of wet and dry specimens including brain. Lectures ….70 hoursTotal 200 hours.Dissection and Practical demonstrations ….130 hours
2	**General Human Physiology, Biochemistry, Nutrition and Dietics**
	1. **THEORY :** Introduction to Physiology- The cell, the components of cell and their functions. Tissues of the body:- Functions of epithelial tissues; glandular tissues, connective tissue and other tissues. 2. **BLOOD :** Fundamentals of muscle nerve physiology,

	Composition and functions of RBC-variations in number in physiological and pathological states-life span and development of RBC.Blood volume, methods of measurement and variation. Haemoglobin: Basic Chemistry and fate of Hb. Blood groups. WBC types,number, variations, functions,formation,circulation. Functions of lymph; Physiology of clotting. 3. **RESPIRATION :** Mechanics of respiration. Sub-divisions of lung air. Transport of respiratory gases in blood. Anoxia-types and physiological changes in artificial respiration 4. **CARDIO**-VASCULAR SYSTEM : Basic haemodynamic principles, arterial blood pressure and factors affecting it. The structure and physiological properties of cardiac muscle.Origin and conduction of heat beat. Cardiac cycle, heat sounds, ECG. Regulation of heart's action Vasomotor system and its regulation-Physiology of shock. 5. **EXERTION :** Urine-Volume, normal and abnormal constituents. Mechanism of urine formation. 6. DIGESTION : Digestion in the mouth, digestion in the stomach and intestines, enzymes of the gastrointestinal tract and their functions. Movements of the gastro-intestinal tract. Physiology of liver, pancreas, absorption and assimilation of food. 7. ENDOCRINES : Thyroid-lodine metabolism-functions of thyroid gland, Hyper and Hypo functioning of thyroid.Adrenal Cortex- Secretion of the cortical cells Actions of gluco and minerals corticoids, hyper and hypo functions of adrenal cortext Adrenaline and non-adrenaline action on various systems.Pituitary gland- Hormones, actions, abnormal functions of pituitary gland. Physiology of posterior Diabeties insipidus.Parathyroid-Actions of Parathromone and calcium metabolism. 8. REPRODUCTION : Ovary-Ovariam hormone-their actions. Menstrual cycle, pregnancy, hormonal changes in pregnancy. Tests for pregnancy. Functions of tests, actions of Testesterone. Physiological basis of Family Planning methods. 9. CENTRAL NERVOUS SYSTEEM : Reflex action, spinal cord, conditional reflix, ascending and descending tracts, cerebral cortex, various areas and functions of Cerebellum.Cerebellum: Physiology of thalamus and hypothalamus, autonomic nervous system. Cerebrospinal fluid Fundamental knowledge of C.N.S. and special senses-

	Regulation of body temperature. 10. SPECIAL SENSES : Fundamental knowledge of vision, hearing, taste and smell. 11. NUTRITION : General metabolism, principles of colorimetry. Basal Metabolic rate; Metabolism of proteins, fats and carbohydrates. Vitamins-Sources, requirement and actions. Basic principles of dietetics.
	Biochemistry:
	The course should provide the students with a sound knowledge on concepts of Biochemistry which are applied to Dental Science. The students should be conversant with the principles and clinical application of Biochemistry - the structure and properties of aminoacids, peptides and proteins; and introduction to the nature of enzymes, and enzymatic reactions, mineral metabolism, whole body metabolism; biological carbohydrates and fats.
	Physiology Practicals
	1. Enumeration of Red blood cells 2. Enumeration of white blood cells and Differential count 3. Determination of haemoglobin. 4. Determination of blood groups. 5. Determination of Pulse and blood pressure. 6. Determination of bleeding time, and clotting time.
	Demonstrations
	1. Determination of packed cell volume 2. Clinical examination of chest 3. Properties of excitable tissue. 4. Activity of frog's heart and effects of vagus stimulation and of atropine and adreneline. 5. Perfusion of frog's heart effects on Na, Ca, and K ions. 6. Demonstration of deep and superficial reflexes.
	Biochemistry Practicals
	1. Reactions of carbohydrates proteins, fats, bile, salts and bile pigments. 2. Gastric analysis 3. Pathological constituents of urine-detection and estimation of reducing sugars. 4. Lectures -50 plus 25 = 75 Total - 145 Practicals -40 plus 30 = 70
3	**Dental materials**
	Lectures 35 hours, Practicals & Demonstrations = 30 Hrs. 1. Introduction: Aims and scope of the science of dental

	materials. 2. Structure and behaviour of Matter. 3. Important physical properties applicable to Dental Materials including their biological considerations 4. Gypsum products used in dentistry including fasting investment materials with or without gypsum binder 5. Impressions materials used in dentistry including duplicating materials. 6. Synthetic resins used in dentistry- (a) General properties and physical characteristics. (b) Resins as denture base materials, repair and reline materials, soft liners, tissue conditioners (c) Resins as restorative materials: unfilled and filled resin restorative materials, tissue sealant (d) Direct-bonding cement materials. 7. Metals and alloys: Their structure and behaviour, some important physical properties. (a) Dental amalgam (b) Gold foil: (c) Dental casting gold alloys: (d) Stainless steel, chrome-cobalt alloys. 8. Dental waxes including inlay casting wax. 9. Gold inlay casting procedures: Preparation of the die-wax pattern spruing, investing -control of shrinkage compensation. Wax elimination- casting machines, casting, defects in castings. 10. Welding and soldering- materials used. 11. Dental Cements: Classification, composition, manipulation, properties and uses:Zinc Cements, Copper cements, Zinc-oxide eugenol cements, Silicate cements, cavity liners, cavity varnishers, resin cements. 12. Dental porcelain including porelain fused to metal. Porcelain furnace and fusing. 13. Mechanics of tooth cutting. Burs and points 14. Abrasives and polishing agents 15. Die & counter die materials including electroforming & Electro-polishing. Practicals & Demonstrations to be arranged in the manipulation of the more common materials
4	**General Pathology**
	Introduction to Pathology as a scientific study of disease and some techniques used in the same 1. Causes of disease with special reference to our prevailing conditions. Cellular structure and Metabolism. Disturbances in Metabolism of cells. Retrogressive changes—Degeneration, Necrosis and Gangrene, Amylodesis, Ligidosis and disorders of

	Pigmentation, calcification. Inflammation -Acute and chronic inflammation. Repair with special emphasis on repair of bones, wounds and the effects of modern treatment on repair. Hypersensitivity and Allergic. Haemorrhage, shock, reaction of body to injury. Circulatory disturbance and Hypertension. Pathology of Bacterial infections with reference to the common diseases prevalent in our country, i.e. Pyogenic infection, Enteric fever, toxemias Tuberculosis Leprosy, Syphilis and some examples of epidemic infections of public health interest and hospital infections. Common diseases of the bone. Injuries due to chemical and physical agents including ionizing radiations. Disturbances of nutrition with special reference to Indian conditions. Metabolic disorders. E.g. Rickets, Scurvey, Diabetes, Mellitus, etc. General biology of Tumours, spread of malignant tumours. A course of lectures, lecture demonstrations and practicals in clinical pathology comprising of Anemias and their laboratory investigations. Laboratory Investigations commonly required by Dental Surgeon. Lectures ……. 45 hours Practicals and demonstrations ……. 60 hrs.
5	**Microbiology**
	A course of lectures, lecture demonstrations and practicals in general Bacteriology and elementary virology, mycology and parasitology. Introduction to Bacteriology with special reference to Medical and Dental Bacteriology including public health and preventive aspect of infection and infections diseases. Pyaemia, sepioemia and toxaemia. Immunity and immunizing agents-vaccines, sera. Auto-immunity with special emphasis on practical application. Morphology, Physiology and classification of micro-organisms in general and of the following in particular pus forming organisms-cocci and bacilli:-- Normal flora of the mouth and upper and lower respiratory tracts. Organisms causing meningitis diptheria, tetanus, gas gangrene, tuberculosis, syphilis. Organisms related to dental caries. Elementary knowledge of virology and mycology with examples of lesions of Orofacial region.

	Common parasites and parasitic diseases- Amuebiasis, malaria, helminthic infections. Lectures 30 hours Practicals and Demonstrations 60 hours
6	**General and Dental Pharmacology and Therapeutics**
	I. General Pharmacology: 1. General principles of pharmacology; dosage forms; prescription writing; pharmacokinetics (absorption, distribution, metabolism and excretion of drugs), mode of action of drugs, factors modifying drug response, adverse drug reactions; drug interactions. 2. CNS drugs; General anaesthetics, hypnotics, analgesice, psychotropic drugs, antiepileptics muscle relaxants, analeptics, local anaesthetics. 3. Autonomic drugs: sympathomimetics, antiadrenergic drugs, parasym-pethomimetics, parasympatholytics, histamine and antihistaminics. 4. Cardiovascular drugs: Cardiac stimulants and antiarrhythmic drugs; antihypertevsive drugs: vasopressor agents and treatment of shock. 5. Drugs acting on blood: Coagulants and anti-coagulants, hematinics. 6. G.I.T. Drugs: Purgatives, anti-diarrhoeal, antacids, anti-emetics 7. Endocrines: Emphasis on treatment of diabetes and edrenal cortical steroids. 8. Chemotherapy: Sulfornamides and antibiotics, chemotherapy of tuberculosis, leprosy and malignancy 9. Vitamins. 10. Miscellaneous drugs: such as diuretics, heavy metal antagonists (B.A.L. and E.D.T.A.) etc. **II Dental pharmacology & Therapeutics:** 1. Anti-septics, astringents, obtundents, mummifying agents, bleaching agents, styptics, disclosing agents, dentifrices and mouth washes. 2. Treatment of common oral condition. Lectures 40 Practicals & Total 60 hours demonstrations 20
7	**Oral and Dental Anatomy, Physiology and Histology**
	I.INTRODUCTION:- Development and growth of jaws. Development of the teeth and surrounding structures and calcifications (including theories) of hard

	tissues. Microscopic anatomy of hard and soft tissue of the tooth and surrounding structures oral mucous membrance, the lips, tongue, floor of the mouth; palate and the salivary glands. Eruption and shedding of teeth. Morphology of teeth Occlusion. Saliva, Calcium metabolism. Mastication and Age changes in teeth and surrounding structures. Clinical consideration where applicable. Practicals/Demonstrations: 1. Demonstration of preparation of dental tissues for microscopic examination. Ground and stained sections 2. Microscopic study of normal oral and dental tissues 3. Microscopic study and identification of teeth. 4. Tooth carving. Lectures 40 hours Practicals 90 hours
8	**General Medicine**
	INTRODUCTION: Aims of Medicine. Definition of diagnosis, prognosis and treatment. History taking and physical examination of a medical case. Medical emergencies in dental practice. **G.I. Disorders:** Stomatitis, glossitis, gastritis, Diarrhoea, Ambiasis, Ascites, malabsorption syndrome. Liver Jaundica, Viral hepatatitis, cirrhosis liver. Tender hepatonegaly. **Cardiovascular System:** Congenital heart disease, classification rheumatic heart disease Subacute bacterial endocarditis. Congestive heart fallure Left verticular failure. Hypertension. Coronary artery disease. Respiratory System Pheumonia, Bronchitis, Embhysaema, Lung, Abscess, Eosinopbilia, Plumonary Embolism, Pulmonary Tuberculosis, respiratory failure. **Renal Diseases:** Nepuritis, Nephrotic Syndrome **Hematology:** Anaemia, Coagulation defects, Bleeding disorders. Agranulocytosis, Leukaemia, Oral manifestations of hematological disorders, Lymphadenopathy and splenonegaly. **Central Nervous System:** Meningitis, Facial Paisy, facial pain Epilepsy, Headache, Syncope. **Nutritional and Metabolic:** Balanced diet normal daily. Protein caloric mainutrition requirements Avitaminosis Diabetes meliitus Calcium homestasis **Endocrine Disorder:** Thyroid-Hypo and hyper pituitary Hypo and hyper parathyroid **Infections:** Entric fever Mumps Viral exanthemata Diphtheria Syphilis Gonorrhaeo **Miscellaneous:** Allergy Drug reactions Drug Interactions Evaluation

	of a case for general anaesthesia. Lectures … 40 130 hours
9	**General Surgery**
	1. Introduction to surgery, surgery especially related to Ora-dental surgery, Classification of diseases. 2. Inflammation, Soft-tissue, hard tissue-Cause, varieties sequelse and treatment. 3. Infections-Acute und Chronic Abscess, Carbuncle Sinus, Fistula, Ulceration, Gangrene, Cellulits, Erysipelas, Septicaemia, Pyaemia, Toxaemia, Cancurm Oils, Tuberculosis, Syphilis, Gonorrhaea, Actinomycosis, Anthrax, Tentanus. 4. Wounds-Complications, Treatment, Repairs Asepsis and Antiseptic measures and procedure with particular reference to the Oral cavity. Haemorrhage and it treatment Haemophillia, Syncope, Shock, Collapse, Head Injury-Introduction. 5. Cysts and new growths-Their general consideration with special reference to those occurring in the Buccal Cavity. 6. Diseases of the Lymphatic glands, especially of the neck. 7. Outline of diseases of the mouth, lips, tongue, palate tonsils and salivary glands. 8. Infections and diseases of the larynx, Tracheostomy. 9. Nervous system-injury to Facial nerves, Paralysis trigeminal Nauraligia. 10. Principles of surgical treatment, diathermy and radium treatment. 11. . Fracture-General principles of treatment, Diathermy and healing. 12. Cleft lip and cleft palate. 13. Thyroid and Parathyroid. 14. Swellings of jaws i. Case sheet writing and demonstration. ii. Ward procedure, including wound dressing. Lectures … 40 Hours Total 130 Hours Clinicals … 90 Hours
10	**Oral Pathology and Microbiology**
	1. Aims and objectives. 2. Development disturbances of dental, oral and para-oral structures, including hereditary disorders. 3. Dental Caries. 4. Pulpal and periapical pathosis and their sequelae. 5. Environmental lesions of the oral and para-oral structures. 6. Defence mechanism of oral tissues and healing following injuries. 7. Diseases of periodontal ligament, gingivae and cementum. 8. Effects of nutritional disturbances and normal disorders on

	the oral and para-oral structures, 9. Infections: Diseases of oral mucosa. 10. Bone disorders affecting jaws. 11. Cysts of oral cavity. 12. Pre-Cancerous lesions-etiology and pathology. 13. Neoplasms of Oral cavity. 14. Diseases of salivary and lymph glands. 15. Diseases of tempero-Mandibular joint. 16. Diseases of nerves, skin, blood and their implications to oral tissues. 17. Effects of radiation on ;oral and para-oral tissues. 18. Oral Microbiology. **PRACTICALS** 1. Identification f hard and soft tissue specimens. 2. dentification of hard and soft tissue specimens. 3. Biopsy and exfoliative eytology techniques. Lectures …. 50 hours 140 hrs. Practicals …. 90 hours